

# ESOH Policy Forecasting for the Army's Strategic and Operational Imperatives

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## AEPI's Interests in ESOH Issue Forecasting

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- Anticipating future environmental, safety, and occupational health (ESOH) issues that will affect how the Army operates overseas
- Exploring implications for wide range of Army operations across the engagement continuum, ***specifically in a contingency basing context***
- Increasing understanding of regional partners' interests to strengthen engagement opportunities



# ESOH Considerations and Military Planning



## Issue

- *ESOH issues and potential threats will drive strategic, operational and logistic challenges that will require responses by security professionals, law enforcement and militaries*



## Opportunity

- *Many ESOH issues can be anticipated, their dynamics tracked, and their likely consequences factored into security planning, both for addressing contingencies and shaping landscapes in ways that make breakdowns less likely*

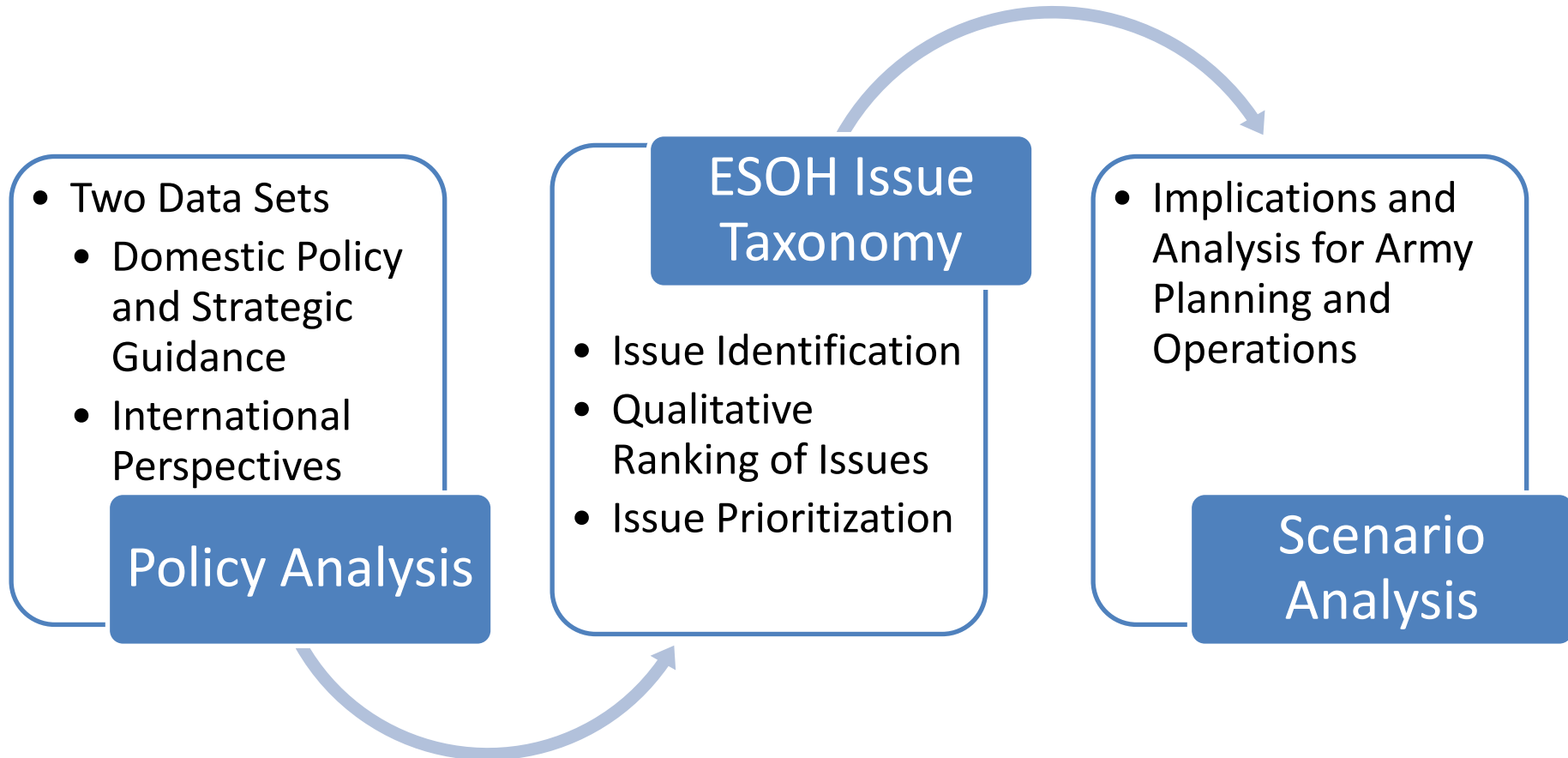


## Challenge

- *Few capabilities exist to track, analyze and forecast ESOH issues and threats, although existing and emerging ESOH threats lurk around the world*



# ESOH Forecasting Methodology





# Domestic and International Data Sets

Document Title	Year	Acronym
<b>Defense and National Security Strategy and Planning Documents</b>		
National Security Strategy	2010	NSS
Quadrennial Defense Review Report	2010	QDR
National Defense Strategy	2008	NDS
National Military Strategy	2004	NMS 04
National Military Strategy	2011	NMS 11
Department of Defense (DoD) Strategic Sustainability Performance Plan	2010	SSPP
Office of the Deputy Under Secretary of Defense for installations & Environment (ODUSD/I&E) Posture Statement 2010	2010	PS
Joint Operating Environment	2010	JOE
<b>Army Policy and Planning Documents</b>		
2010 Army Posture Statement	2010	APS
Army Sustainability Campaign Plan	2010	ASCP
Army Strategy for the Environment	2004	ASE
Assistant Secretary of the Army for Installations and Environment (ASA I&E) Strategic Plan 2009-2015	2009	SP
ASA I&E Army Safety and Occupational Health Strategic Plan	2010	SOHSP
Army Sustainability Report	2009	ASR
TRADOC Pamphlet: United States Army Concept Capability Plan for Army Base Camps (ABC) in Full Spectrum Operations for the Future Modular Force 2015-2024	2009	TP/ABC
Army Campaign Plan for Health Promotion, Risk Reduction, and Suicide	2009	ACPSP
Draft Army Strategic Planning Guidance	2011	ASP
<b>Army Regulations</b>		
U.S. Army Regulations 200-1: Environmental Protection and Enhancement	2007	EPE
U.S. Army Regulations 385-01: Army Safety Program	2010	Safety
U.S. Army Regulations 40-5: Preventative Medicine	2007	PM
<b>Source Documents</b>		
Executive Order 13514	2009	EO
Millennium Project – Emerging World Issues Affecting U.S. Military	2010	MP
U.S. Government Accountability Office (GAO) Strategic Plan 2015-2015	2010	GAO
State, Foreign Operations, and Related Programs: FY 2010 Budget and Appropriations	2010	SFORP



## Brazil

- Many of the environmental issues facing the Armed Forces center on protecting the Amazon from illegal degradation.
  - Narcotics trafficking significantly contributes to degradation; the Brazilian government has inserted a counter-drug police force in the Amazon.
- Environmental management system, education programs and initiatives to prevent infectious diseases implementation
- The government is active in SOH issues and has established policies for military personnel serving in areas with disease outbreaks.

## Chile

- Environmental policy in Chile is relatively new.
- The Chilean Army is focused on:
  - Environmental Impact and Restoration
  - Emissions, Effluents and Waste
  - Environmental Training
- The Army has established environmental policies to reduce its environmental footprint and raise awareness of biodiversity issues when training/operating in natural areas.
- The Chilean Army is charged with caring for the health of the nation's citizens, peacekeeping efforts and natural disaster relief.

## Colombia

- The Armed Forces are required to develop and implement environmental policy and programs and must ensure that natural resources are protected and their environmental footprint is minimal.
- The Colombian military engages in three levels of disaster response: prevention, relief and mitigation.
- The primary aim of OH services is to reduce the number of casualties in the Armed Forces.
- Terrorist groups and narcotics trafficking have increased environmental damage.

## Mexico

- Deforestation, water pollution and frequent fires and hurricanes are important environmental issues.
- The Armed Forces address environmental issues via three main policy areas: environmental footprint reduction, protection of natural environment and natural disaster response.
- The Armed Forces also provide medical assistance during health emergencies, disease outbreaks and natural disasters.
- Combating narcotics trafficking has limited the ability of the Armed Forces to assist in ESOH areas due to a drain on resources.





# ESOH Issue Taxonomy

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## Environment

- Sustainability
- Climate Adaptation
- Energy Security
- Water Security
- Food Security
- Ecosystem Services
- Narcotics Trafficking

## Safety

- Weapon Safety
- Toxic and Hazardous Substances
- Infrastructure

## Occupational Health

- Overall Health of Force
- Disease/Pandemics





# Issue Ranking/ Prioritization

**ESOH Issues derived from document and international analysis were analyzed using two filters:**

- **Treatment in National Security and Policy Documents**
  - Color code was used to determine how ESOH issue and sub-element was or was not addressed in each document
- **Relevance to Army Roles of Land Forces**
  - Evaluation of whether the ESOH issue or sub-element impacted the Roles of the land Forces

## Color Code Key

- : The issue area is addressed well in the document.
- : The issue area is addressed, but not adequately, in the document.
- : This topic would be important for the document but is not addressed.
- : This topic is outside of the scope and intent of the document.



# Issue Ranking/ Prioritization

## Filter #1: Treatment in National Security and Policy Documents

	Defense and National Security Strategy and Planning Documents							Army Policy and Planning Documents							Army Regulations			
Issue Areas	NSS	QDR	NDS	NMS	SSPP	PS	JOE	APS	ASCP	ASE	SP	S&OH	ASR	TPI/ABC	ACSP	EPE	Safety	PM
ENVIRONMENT																		
<b>Sustainability.</b> Sustainability identified as a guiding principle that enhances both present and future mission needs, minimizes total environmental footprint (e.g., lowers demand for resources and reduces/eliminates waste and pollution), and strengthens community partnerships in host nations.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Growing need to incorporate sustainability principles into the lifecycle of base camps and operations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Increased need to use sustainability principles to inform the selection process for base camp site locations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Growing need to implement “green” procurement practices that use lifecycle analyses	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Recognition of need for training to instill sustainable practices into all levels of personnel and operations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Need to focus on sustainable practices in an urban setting in host nations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–To help reduce environmental footprint when departing from host nation (e.g., sustainable waste management practices)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
<b>Climate Change and Adaptation Strategies.</b> Climate Change characterized as an “accelerant of instability” and seen as a major factor that can unfavorably affect military installations and operations by creating increasingly adverse conditions (e.g., inadequate access to and increased competition for resources, and increased severity and frequency of weather events, including natural disasters).	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Expanded requirement for humanitarian and disaster relief missions	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–New mission requirements that include protecting ecosystem (e.g., carbon sinks)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–New requirements for preparedness in overseas operations (e.g., new capacities, technologies, or techniques required; new vaccines and training regimes)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●
–Changing requirements for infrastructure at base camps	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	○
<b>Water Security.</b> Increased water scarcity around the world characterized as a driver of future conflict; lack of reliable access to water characterized as a constraint to the sustainability of military installations, a precipitator of increased risks in operations, and a source of tension with host nations.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●
–Increased regional instability	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Increased logistics vulnerabilities at base camps and during military operations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Need for long-term water management planning for overseas operations (e.g., water efficiency, use reduction, waste water management)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○
–Need for development and implementation of water management technologies	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	○	○



# Issue Ranking/ Prioritization

## Filter #2: Relevance to Army Role of Land Forces

		Relevance to Role of Land Forces				
Issue Area	Regional Source (if any)	Role #1 (COIN)	Role #2 (Engage Other Nations)	Role #3 (Support to Civil Authorities)	Role #4 (Deter/Defeat)	Score
ENVIRONMENT						
<b>Sustainability.</b> Sustainability identified as a guiding principle that enhances both present and future mission needs, minimizes total environmental footprint (e.g., lowers demand for resources and reduces/eliminates waste and pollution), and strengthens community partnerships in host nations.	Brazil Chile Colombia Mexico	Y	N	Y	Y	7
<b>Climate Change and Adaptation Strategies.</b> Climate Change characterized as an “accelerant of instability” and seen as a major factor that can unfavorably affect military installations and operations by creating increasingly adverse conditions (e.g., inadequate access to and increased competition for resources and increased severity and frequency of weather events, including natural disasters).	Brazil Chile Colombia Mexico	Y	Y	Y	N	7
<b>Water Security.</b> Increased water scarcity around the world characterized as a driver of future conflict; lack of reliable access to water characterized as a constraint to the sustainability of military installations, a precipitator of increased risks in operations, and a source of tension with host nations.	Mexico Chile	Y	Y	Y	Y	6

## Role of Land Forces in Overseas Areas\*

- Prevail in Protracted Counter Insurgency (COIN) Operations
- Engage to Help other Nations
- Provide Support to Civil Authorities
- Deter and Defeat Hybrid and Hostile State Actors

\* 2010 Army Posture Statement



# Top Ranking ESOH Issues

**Highest ranking ESOH issue areas tended to have three characteristics:**

1. Relevant to three or more of the U.S. Army's roles overseas
2. At least two countries analyzed in this study identified issues as focus or concern
3. Coverage in strategy and policy documents is uneven

## Top Ranking Issues (total/# of countries)

- Climate Change Adaptation (7/4)
- Sustainability (7/4)
- Overall Health of the Force (7/3)
- Disease /Pandemic (6/4)
- Water Security (6/2)
- Ecosystem Services (5/4)
- Narcotrafficking (5/3)
- Energy (5/2)
- Food Security (5/1)



# Scenarios: Exploration Implications of ESOH Issues



**Identification, Analysis, Priority Setting**



**Threat Multiplier / Intensifier / Amplifier**



**Installations and Readiness**

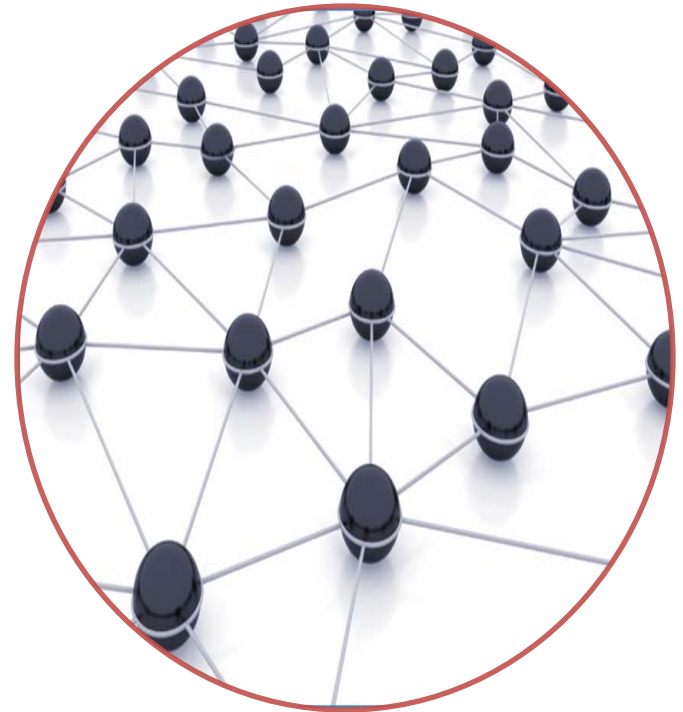


**Capabilities and Collaboration**



# Identification, Analysis, Priority Setting

- What should we be paying attention to? How do we set priorities? Where are the intersections of environmental vulnerability and societal, cultural, demographic, security, military trends?
- Where are the gaps in our knowledge?







# Threat Multiplier / Intensifier / Amplifier

- How do we plan for contingencies caused by environmental issues and/or natural disasters intersecting with political, economic, social or cultural threats and challenges?







## Installations and Readiness

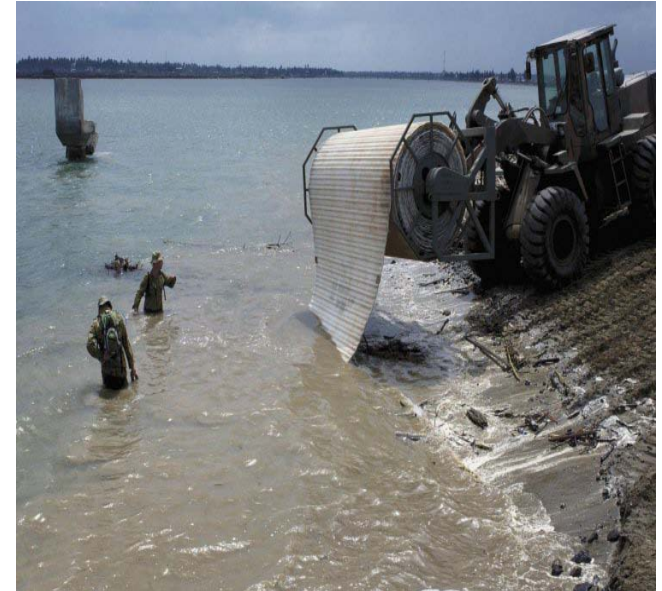
- How do we plan for climate change and environmental strain threatening fixed installations and infrastructure and the operational readiness of military and security forces and equipment?





# Capabilities and Collaboration

- What kinds of new or enhanced capabilities will be required to address changing operational landscapes threatened by environmental breakdowns? What kinds of new doctrines and operations? What kind of new missions?
- What kinds of new alliances, collaborations, or relationships are required to prevent, build resilience, and mitigate the effects of environmental strain?





# Temporal Element

## Three key insights:

- A wide range of security challenges due to climate change and environmental strain / degradation are already visible
- Effects will likely grow worse with time
- To mitigate the the most intense effects, which will be felt in 15+ years or beyond, security and military planning must grapple with the causes and and their sources now





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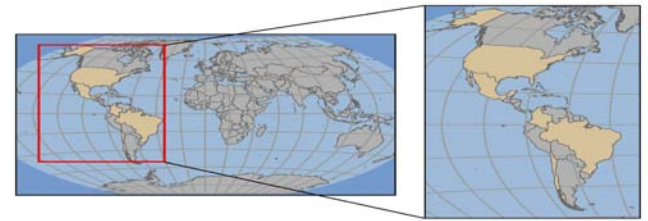
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# Questions